

CLAIMS

1. A method of detecting coagulation of a fluid comprising providing a magnetic field to cause particles to move within the fluid, illuminating the fluid and optically
5 detecting at least one of presence of the particles at a predetermined location in the fluid and movement of the particles through a predetermined location in the fluid.
2. A method as claimed in claim 1, wherein the magnetic field is such as to cause the particles to translate within the fluid.
- 10 3. A method of detecting coagulation of a fluid comprising providing a magnetic field to cause particles to move to and fro within the fluid, illuminating the fluid and optically detecting at least one of presence of the particles at a predetermined location in the fluid and movement of the particles through a predetermined location in the
15 fluid.
4. A method of detecting coagulation of a fluid comprising providing a container holding said fluid, applying a magnetic field at one zone of a container whereby particles move towards said one zone through the fluid, applying a magnetic field at
20 another zone of said container whereby said particles move through said fluid towards said another zone, illuminating the fluid and optically detecting at least one of presence of the particles at a predetermined location in the fluid and movement of the particles through a predetermined location in the fluid.
- 25 5. A method according to claim 4, wherein said one zone is one end of the container and said another zone is a substantially opposite end of the container.
6. A method as claimed in any preceding claim wherein the particles are paramagnetic.

7. A method as claimed in any of claims 1-5, wherein the particles are superparamagnetic.
- 5 8. A method as claimed in any preceding claim wherein there is provided at least one electromagnetic, wherein the method includes selectively controlling current applied to the or each electromagnet.
- 10 9. Apparatus constructed and arranged to detect coagulation of a fluid comprising a controllable magnetic arrangement operable to provide a magnetic field such as to cause particles to move within the fluid, a light source for illuminating the fluid and a detector for optically detecting at least one of presence of the particles at a predetermined location in the fluid and movement of the particles through a predetermined location in the fluid.
- 15 10. Apparatus according to claim 7, wherein the fluid is blood.
11. Apparatus for detecting coagulation of a fluid comprising
a structure defining a container for a said fluid, the structure further containing
20 particles for movement through the container under the influence of a magnetic field;
a magnetic arrangement for providing sequential magnetic fields to the container such as to cause the particles to move;
a light source for illuminating the container and
a detector for detecting optical radiation from the light source after passing
25 through the container, the detector being arranged for optically detecting at least one of presence of the particles at a predetermined location in the fluid and movement of the particles through a predetermined location in the fluid.

12. Apparatus according to claim 11, wherein the particles are held within the container prior to introduction of said fluid into the container.

5 13. A device for detecting coagulation of a fluid, by means of a structure defining a container for a said fluid, the structure further containing particles for movement through the container under the influence of a magnetic field, the device comprising:
means for engaging a said structure in a defined region of said device;
a magnetic arrangement for sequentially providing a first magnetic field across the defined region and a second magnetic field across the defined region wherein the
10 first magnetic field has a first sense substantially different to a second sense of the second magnetic field;
a light source for illuminating at least a part of the defined region and
a detector for detecting optical radiation from the light source after passing through the defined region, the detector being arranged for optically detecting at least
15 one of presence of the particles at a predetermined location in the fluid and movement of the particles through a predetermined location in the fluid.

20 14. A device according to claim 13, wherein the detector is disposed to detect light transmitted from one side of the defined region to an opposite side.

15. A device according to claim 13, wherein the detector is disposed to detect light reflected back from within the defined region.

25 16. A structure for use with a device of claim 13, the structure comprising plural laminae, respective laminae defining one or more sample chambers, and channelling for introduction into the or each sample chambers of a sample of fluid.

17. A structure according to claim 16, wherein at least one lamina has a notch at one end for sample application

18. A structure according to claim 16 or 17, wherein at least one sample chamber contains particles that are arranged in use to be movable through a fluid in a sample chamber.

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19. A structure as claimed in any of claims 16 to 18, wherein the particles are superparamagnetic.

20. A structure as claimed in any of claims 16 to 18, wherein the particles are
10 paramagnetic.